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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/420,775	10/19/1999	OSAMU YAMADA	862.3074	3282

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EXAMINER

SHERALI, ISHRAT I

ART UNIT PAPER NUMBER

2621

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/420,775

Applicant(s)

YAMADA ET AL.

Examiner

Sherali Ishrat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-13, 15, 19-21, 26-30 and 32 is/are rejected.
- 7) ☐ Claim(s) 8-10, 14, 16-18, 22-25 and 31 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4 and 6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 13, 15, 19-21, 26-29 and 32 are rejected under 35 USC 102 (b) as being anticipated by Eschbach et al. (5,450, 217).

Regarding claim 1, 26 and 32, Eschbach discloses discriminating characteristics of an image (See Eschbach, col. 6, lines 6-10, Eschbach shows discriminating the color value of pixel in the image $r, g, b = (255, 254, 253)$;

calculating saturation information of the image (See Eschbach, col, lines 6-10, Eschbach shows converting the image pixel vale into luminance-hue-saturation space and saturation of the image pixel is 0.008 and Eschbach shows changing saturation S to 1);

setting a parameter used to convert saturation of the image in accordance with characteristics discriminated (See Eschbach, col. 6, lines 25-35, Eschbach is setting parameter "k" which is ratio of luminance Y before saturation S is change to 1 [characteristic discriminated] and luminance Y' after S is changed to 1 [col. 6, lines 7-12] and col. 6, lines 36-38, Eschbach shows

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luminance and saturation corrected (r,g,b) values are obtained based on parameter k);

converting the saturation of the image on the basis of the parameter (See Eschbach, col. 6, lines 36-38, Eschbach shows luminance and saturation corrected (r,g,b) values are obtained based on parameter k).

Regarding claims 2 and 27, Eschbach discloses discriminating of the attributes to which image belongs (See Eschbach, col. 6, lines 7-8, Eschbach discrimination color values [discriminating attribute] of image pixel [r, g, b]).

Regarding claims 3 and 28, Eschbach discloses attribute is color attribute (See Eschbach, col. 6, lines 7-8, Eschbach discrimination color values [discriminating attribute] of image pixel [r, g, b]).

Regarding claim 4, Eschbach discloses attribute is set in correspondence with the object (See col. 4, lines 43-45, Eschbach shows segmenting the image which identify type of image pictorial or non-pictorial and on col. 6, lines 7-8, Eschbach discrimination color values [discriminating attribute] of image pixel [r, g, b] i.e Eschbach shows attribute is set in correspondence with the object i.e pictorial or non-pictorial).

Regarding claim 5, Eschbach discloses attribute includes one of "person", "flower", "sky", "grass" and "general background" (See Eschbach, col. 4, lines 43-45, Eschbach shows segmenting the image which identify type of image pictorial or non-pictorial, pictorial image would include one of person", "flower", "sky", "grass" and non-pictorial would include background).

Regarding claim 6, Eschbach discloses attribute includes "white" that image is substantially white (See Eschbach, col. 4, lines 43-45, Eschbach shows segmenting the image which identify type of image pictorial or non-pictorial, pictorial image can include white object such as white car).

Regarding claim 7, Eschbach discloses attribute further include "other" which does not belong to any other attribute (See Eschbach, col. 4, lines 43-45, Eschbach shows segmenting the image which identify type of image pictorial or non-pictorial, non pictorial image can include text which would be other).

Regarding claim 13, Eschabach discloses setting plurality of parameters (See Eschbach, col. 6, lines 30-35, Eschbach shows setting parameter k , r' , g' and b' to calculate the luminance and saturation corrected rgb values [col. 6, lines 36-40]).

Regarding claim 15, Eschbach discloses saturation conversion is determined based on plurality of parameters (See Eschbach, col. 6, lines 30-35, Eschbach shows setting parameter k , r' , g' and b' to calculate the luminance and saturation corrected rgb values [col. 6, lines 36-40]).

Regarding claim 19, Eschbach discloses calculating saturation information by converting the image into a second color space (See Eschbach, col. 6, lines 6-10, Eschbach shows to calculate saturation S , rgb value are converted into HSV space).

Regarding claim 20, Eschbach discloses converting image into first color space which has been saturated converted (See Eschbach, col. 6, lines 36-40,

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Eschbach shows after saturation correction image pixel value is converted back to rgb values).

Regarding claim 21, Eschbach discloses first color space is RGB and second is HLS (See Eschbach, col. 6, lines 7-10 and col. 5, lines 11-15, Eschbach shows first color space is RGB and second is HLS [luminance-hue-saturation one such space is HSV, col. 5, lines 11-15])

Regarding claim 29, Eschbach discloses setting the parameter to convert saturation of a color indicated by the attribute in the image which is set in advance in units of attributes (See Eschbach, col. 6, lines 6-30, Eschbach shows equation for setting the parameter k to convert saturation of color image based on the attribute such as r,g,b [original] values which can be set in advance).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11-12 and 30 are rejected under 35 USC 103 (a) as being unpatentable over Eschbach et al. (5,450, 217) in view of Murakami (US 5,335,097).

Regarding claims 11 and 30, Eschbach has shown segmenting an image (See col. 4, lines 42-45, segmenting the document image).

Eschbach has not explicitly shown segmenting the image into blocks and discriminating attributes in units of blocks.

In the same field of endeavor Murakami discloses segmenting the image into blocks and discriminating attributes in units of blocks (See Murakami, figure 3, 4a, and 4b segmenting the image in units of blocks and col. 11, lines 26-40, Murakami shows segmenting the image into pixel blocks and Murakami shows discriminating color [attribute] of pixel blocks where color correction is required and pixel blocks where color correction is not required.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to segment the image into blocks and discriminating attributes in units of blocks as shown by Murakami in the system of Eschbach because such a system provide color-saturation correction for localized area of the image as opposed to the whole image and thereby saving processing time of the image processor .

Regarding claim 12, Murakami discloses set the parameter with high priority when attributes differ in unit of blocks (See Murakami, See Murakami, figure 3, 4a, and 4b segmenting the image in units of blocks and col. 11, lines 26-40, Murakami shows segmenting the image into pixel blocks and Murakami shows discriminating color [attribute] of pixel blocks where color correction is required and pixel blocks where color correction is not required i.e Murakami shows set the parameter with high priority when attributes differ in unit of blocks).

Allowable Subject Matter

5. Claims 8-10, 14, 16-18, 22-25 and 31 are objected as being dependent on rejected base claim but would be allowable if rewritten in independent form including limitations of the base claim and any intervening claims.

Communication

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherali Ishrat whose telephone number is 703-308-9589. The examiner can normally be reached on 8:00 AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ishrat Sherali

Application/Control Number: 09/420,775

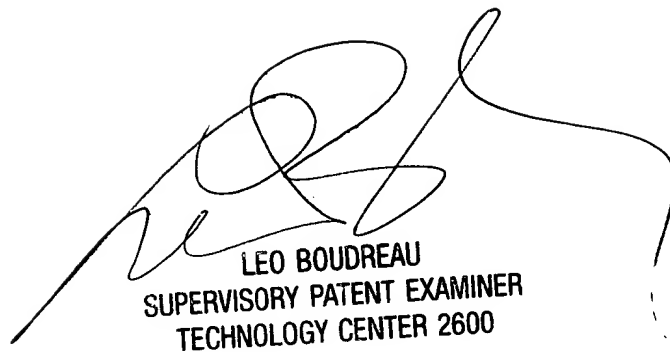
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Patent Examiner

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June 26, 2004



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